

WHAT IS CLAIMED IS:

1. A capillary array comprising;
a plurality of capillaries for holding a separation medium for separating a sample;
a detecting portion for maintaining alignment of the capillaries;
a capillary head for bundling and holding capillaries to one end of the capillaries;
a load header provided at sample injection end portions of the capillaries, comprising;
 tubular electrodes to allow insertion of sample injection end portions of capillaries;
 a connection plate electrically connected with the tubular electrodes;
 an insulated holder fixed the tubular electrodes, and;
 a cover allocated at the insulated holder for insulating the connection plate;
wherein the connection plate, the insulated holder and the cover are substantially closely arranged without gaps among these elements.
2. The capillary array according to claim 1, wherein a filling material is applied to a gap between the holder and connection plate of the load header and/or to a gap between the connection plate and cover.
3. The capillary array according to claim 2, wherein the filling material has higher heat conductance than the air.
4. The capillary array according to claim 3, wherein a conductive resin is substituted for the connection plate within the load header to

electrically connect the tubular electrodes with each other and the holder, cover and tubular electrodes are closely arranged without allowing substantial formation of gaps.

5. An electrophoresis apparatus comprising;

a capillary array comprising;

- a plurality of capillaries for holding a separation medium for separating a fluorescence labeled sample;

- a detecting portion for maintaining alignment of the capillaries;

- a capillary head for bundling and holding capillaries to one end of the capillaries;

- a load header provided at sample injection end portions of the capillaries, comprising;

 - tubular electrodes to allow insertion of sample injection end portions of capillaries;

 - a connection plate electrically connected with the tubular electrodes;

 - an insulated holder fixed the tubular electrodes, and;

 - a cover allocated at the insulated holder for insulating the connection plate;

- an optical unit for irradiating a light to the detecting portion, and detecting a light from the fluorescence labeled sample;

- a buffer container capable of soaking the sample injecting end portions of capillaries and the tubular electrodes in a buffer, and;

- a power supply capable of applying a voltage to an electricity passage from the connection plate to the detecting portion via the sample injection end portion and the buffer;

wherein the connection plate, the insulated holder and the cover are substantially closely arranged without gaps among these elements.

6. The electrophoresis apparatus according to claim 5, wherein a filling material is applied to a gap between the holder and connection plate of the load header and/or to a gap between the connection plate and cover.

7. The electrophoresis apparatus according to claim 6, wherein the filling material has higher heat conductance than the air.

8. The electrophoresis apparatus according to claim 7, wherein a conductive resin is substituted for the connection plate within the load header to electrically connect the tubular electrodes with each other and the holder, cover and tubular electrodes are closely arranged without allowing substantial formation of gaps.